



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

mm

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,222	09/08/2003	Morton M. Mower	06809.0030-00000	1067
22852	7590	04/02/2007	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			KAHELIN, MICHAEL WILLIAM	
		ART UNIT		PAPER NUMBER
				3762
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	04/02/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/656,222	MOWER, MORTON M.
	Examiner Michael Kahelin	Art Unit 3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 30 November 2006.
- 2a)  This action is FINAL. 2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-12, 18-35, 38-47, 51-53 and 55-64 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-12, 18-35, 38-47, 51-53 and 55-64 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on 30 November 2006 is/are: a)  accepted or b)  objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All b)  Some \* c)  None of:
    1.  Certified copies of the priority documents have been received.
    2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 20060620; 20061208.
- 4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5)  Notice of Informal Patent Application
- 6)  Other: \_\_\_\_\_.

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/30/2006 has been entered.

***Information Disclosure Statement***

2. The information disclosure statement filed 12/8/2006 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because some of the references were published within two years before the filing date of the instant application and lacking a publication month. Additionally, a reference is lacking a publication date. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-12, 18-33, 35, 41-44, and 55-64 are rejected under 35 U.S.C. 102(e) as being anticipated by Mathis et al. (US 6,643,546, hereinafter “Mathis”).

5. In regards to claims 1, 18-20, 24, 41, 42, 55, 63 and 64, Mathis discloses a device/method of controlling the heart suffering from heart failure (title) comprising receiving electrical signals from a portion of the heart with electrodes, determining the progress of contraction in the heart with a processor, and stimulating the heart at a plurality of locations in the chamber based on the progress of contraction (Fig. 1 and col. 13, line 41). Further, locations in or around the left ventricle are stimulated (Figs. 8-11, via the interventricular septum).

6. In regards to claim 2, receiving signals comprises sensing depolarizations from an atrium (col. 19, line 1).

7. In regards to claim 3, the depolarizations are sensed from multiple locations in the atrium (Fig. 11 and col. 17, line 7).

8. In regards to claims 4, 5, 56 and 57, receiving signals comprises sensing depolarizations from multiple locations in the ventricle (col. 15, line 3).
9. In regards to claims 6 and 29, determining the progress of contraction comprises determining a delay between a first and second location in the chamber (col. 15, line 12).
10. In regards to claims 7, 8, 25, 26, 30, 31, 58 and 59, stimulating the chamber comprises applying a first signal at a first location and selectively applying a second signal at a second location based on whether the electrical activity fails to reach a threshold level within an interval of time (col. 15, line 9). Further, the left ventricle is stimulated (Figs. 8-11).
11. In regards to claims 9, 32 and 60, the first and second signals can be delivered simultaneously (col. 15, line 22).
12. In regards to claims 10, 11, 61 and 62, stimulating the heart comprises stimulating at least two locations along a short axis (Fig. 8, E2 and E3) and a long axis (Fig. 8, E2 and E5).
13. In regards to claims 12 and 35, at least three locations are stimulated (Fig. 11).
14. In regards to claims 21 and 44, the voltage level of the signal is varied based on control signals (col. 6, line 11).
15. In regards to claim 22, the signal generator varies the pulse width of the pulses based on control signals (col. 6, line 14).
16. In regards to claim 23, at least two electrodes are in a single chamber of the heart (Figs. 8-11).

17. In regards to claims 27, 28, 33 and 43, the electrodes send and receive signals from a coronary vein (col. 8, line 34).

***Claim Rejections - 35 USC § 103***

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims 34, 38-40, 45-47, and 51-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathis. Mathis discloses the essential features of the claimed invention, including utilizing an electrode in direct contact with the interventricular septum, but does not disclose utilizing an electrode implanted in the interventricular septum or stimulating at a current of 10mA. It is well known in the art to utilize electrodes implanted in the ventricular septum to affect stimulation of the right and/or left ventricles with a lead that is securely fixed and resists dislodgement, and to utilize a stimulation current of 10mA to improve cardiac output while avoiding tissue damage. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Mathis' invention by utilizing electrodes implanted in the ventricular septum to affect stimulation of the right and/or left ventricles with a lead that is securely fixed and resists dislodgement, and to utilize a stimulation current of 10mA to provide cardiac output1 while avoiding tissue damage.

***Response to Arguments***

20. Applicant's arguments with respect to claims 1-12, 18-35, 38-47, 51-53, and 55-64 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Audoglio (US 6,556,874) is one of many teachings of providing pacing leads that are implanted in the interventricular septum and Ben-Haim et al. (US 6,317,631) is one of many teachings of stimulating cardiac tissue with a current of about 10mA.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kahelin whose telephone number is (571) 272-8688. The examiner can normally be reached on M-F, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on (571) 272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GEORGE R. EVANISKO  
PRIMARY EXAMINER

3/29/17

MWK

*MKR*  
3/29/07